

THE 170 NEWS

Third Quarter 2021



The Quarterly Publication of The International Cessna 170 Association, Inc.



www.cessna170.org

THE 170 NEWS CONTENTS

Third Quarter 2021 Vol. 52 No. 3

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On the Front:

**170B 52
N2458D 20610**
Stanley Kasica #9960 CT
Waterbury (N41) Fly-in

Photo by Drew Lyons



On the Back:

**170B 52
N1945C 26090**
Dennis Wassman #6134 CA
Over Sonoma, California
Pilot Ben Presten

Photo by Eric Presten



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The 170 News is published quarterly as a benefit of membership in The International Cessna 170 Association (TIC170A). The organization was formed in 1969 to *Preserve and Promote a Truly Classic Aircraft*. For membership or advertising information contact:
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Association News

From the Cockpit

I am writing this on the eve of this year's convention. A big thanks to Duane and his crew for their persistence and patience. This is the start of us getting back to why we all joined together in our organization.

I feel we are finally getting past a very trying time for all of us.

I will be happy to get back to live meetings. But in the meantime, we have been doing what is necessary to keep our organization complying with the bylaws.

Saturday, October 9, we held the board meeting via Zoom (minutes in this issue). Thank you to Director Matt Roberts for the use of his Zoom account.

During the board meeting, we learned about the well underway plans for the next two conventions. Again, a

big thanks to Steve Grimsley and Miles and Karen Bowen for stepping up as hosts. I can say, looking back, it was enjoyable to be a host.

I wish all of you well, and let's get all of this in our prop wash.

Fly safe and call a friend,

Ron



Ron Magos, President

From the Executive Secretary



Jan Billeb, Exec. Secretary

I feel like a broken record, but here I go again.

We need photos for the publications!

I try to use seasonal photos, and in the air ones make really good cover shots.

A photo needs to be 300 dpi resolution at 8-1/2x11 inches to use as a cover photo.

Smaller photos work great on the back cover, inside the quarterly or in the *Flypaper*.

When you email me your photos, make sure that you are sending the highest resolution (largest file) copy of your photo. Make sure that your email program is not set to reduce the size of attachments. Contact me if you need help knowing the photo size or emailing them. I can also scan actual photographs if they are good quality.

We need content for the publications! Have you recently done a repair, upgrade, flown somewhere interesting, visited members? Articles can be emailed as Word or wordprocessing documents or typed into an email. Of course, they can also be mailed to me.

I hope everyone is enjoying fall! We've had two straight days of snow in Cody, Wyoming, but, fortunately, this time of year, it doesn't stay long.

Articles Needed

Share your experiences maintaining, flying and enjoying your 170 with other members.

Send articles and photos to:
headquarters@cessna170.org

Flying a B Model?

Slipping your 170B with full flaps extended could be hazardous

Cessna recommends against it and TIC170A thinks everyone should follow that recommendation.

For technical information, maintenance or parts questions contact:

George Horn, Parts/Maintenance Advisor, gahorn@cessna170.org or (512) 924-2462

Or visit our forum at: www.cessna170.org

News & Info



Oshkosh

Thanks to Director David Stokes for overseeing the type club table at Oshkosh, and to the many volunteers who filled in times at the table.

An ABC News interview at the 170 table with Joe and Robin Smothers and Dave Stokes can be viewed at www.facebook.com/WBAYTV/videos/408988620533443/



Howard #594 and Gail Bohl in N3055A, 1953 Cessna 170B, waiting for F-18 Super Hornet to land at EAA AirVenture 2021.

Winner!

Everyone who contributes an article for *The 170 News* is entered into a drawing to receive a complimentary one-year membership! The winner will be drawn twice a year from the names of authors. Technical information, how-to, how you did it, flying stories, etc. are welcome.

The winner for the first half of 2021 is -David Stokes. Congratulations, and thank you for sharing.

Convention Albums on the Website

Historian Steve Grimsley, with the help of Karl Towle, worked very hard to convert and preserve convention photograph albums to digital files. The majority of the work is done and available for members to download or view in the Members Area of the Association's website.

Steve estimates that about 5000 pages and twice that many photos will be available to members to enjoy. "The time span of consecutive albums is 35 years so you can see how the early kids have grown and how fast the rest of us grew old. Also, the images of many dear friends no longer with us are preserved for those who remember them," said Steve.

Now available on the website in the Members Area are convention albums 1969, 1986-2005, 2013-2019. You do need to log in to the Members Area.

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170A
1949 to 1952



Daughter Janelle, my Pauline, grandson Nate, son-in-law Kim, grandson Nick, and Joyce Snyder, with Jim's plane.

Snyder's Ranch Visit August 2021

Duane Shockey #2092 CA

Since Jim Snyder (member #919) died in 2017, his wife Joyce, age 82 (member #10196), and her family have been running the cattle ranch of more than 12 square miles. At times they have nearly 400 beef cattle. They received the "Pioneer Award" for the ranch being in the family for more than 100 years. Joyce has three daughters, two sons-in-law, and grandchildren who help her. I have gone to the ranch four or five times over the years to help Jim and Joyce during haying season.

Pauline and I spent nine days there in August. Trying to keep Joyce off the tractor, I drove the 36 ft. hayrack while daughter Jill and grandson Nick (winner of the "Youth Congeniality Award" at the 2011 convention) pulled the mowing machines, and sons-in-law Kim and Mark pulled

the baling machine. Pauline and Joyce worked in the garden and prepared meals for as many as eight.

Jim's plane has only flown 13 hours since the last annual inspection in 2013, that's when he no longer felt healthy enough to fly. I got it started when we were there after the Wichita convention and again this time while we were visiting. It made the family feel good to hear the engine run. There is a possibility that son-in-law Kim and two grandsons might be taking flying lessons soon. It would be good to see the "Blue Tail Fly N3584C" in the air again.

Joyce and many of her family attended the Cody convention. They have a soft spot in their hearts for the 170 Association. I hope to see them attending future conventions.

Remembering Jerry Terlisner

I am sorry that Jerry was taken away from us. I met Jerry at the Galveston convention. Since he did not have a navigator to join him in the cross country, I went along. At the end of the flight, there was a Japanese flag to be seen if you followed all the clues right. We did not feel like going through the hassle so we just flew back to the airport without finding the target.

I did not know that you can find a tailwheel tow bar online for about \$100. When Jerry got home, he got a long strip of masking paper and set his tow bar on it. He took a can of spray paint and sprayed all around it. He then wrote the fasteners (pins, bolts, springs, etc.) with arrows pointing to the locations. He rolled it up and mailed it to me. I made my tow bar for my 170 from these plans.

We are going to miss him.

Solomon Bruck #7468 CA

Condolences

Mary Ann Tomasello, wife of member Richard Tomasello #675, El Cajon, California, passed away in August after an extended illness.

For years Mary Ann made and donated the porcelain plates that have been presented to convention hosts as a thank you.

Association condolences were extended to Richard. His mailing address is 15621 Las Lomas Rd, El Cajon, CA 92021 for those who want to send personal sympathies.

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(307) 587-6397 or headquarters@cessna170.org**



The International Cessna 170 Association, Inc.

Draft Minutes of the Association Board Meeting

The Board Meeting of The International Cessna 170 Association, Inc. was called to order Saturday, October 9, 2021, at 2:00 pm Eastern by Association President Ron Magos via Zoom. Officers present: President Ron Magos, Secretary/Treasurer Terry Daily, Historian Steve Grimsley. Directors present: Gary Hanson (joined 2:20 pm), Bob Jolley, Matt Roberts, Larry Roessler, Ryan Smith, Joe Smothers, David Stokes, Karl Towle, and Past President John Hess. A quorum was present. Others present: Executive Secretary Jan Billeb, guests Miles Bowen, Sandy Walther, Gary Friesen, and Bob Barrett.

After roll call, Jan Billeb read the list of deceased members since the 2019 convention. Bob Jolley gave the invocation.

David Stokes moved to approve the minutes of the Midyear Meeting on February 13, 2021, the email vote regarding Sun 'n Fun donation, and the email vote regarding Vintage Aircraft Association donation. The motion was seconded by Terry Daily and adopted.

Treasurer's Report

Terry Daily asked if there were any questions regarding the latest financial report ending August 31, 2021.

Ron Magos moved to approve the current Treasurer's Report, seconded by Karl Towle. The motion was adopted.

Executive Secretary's Report

Jan Billeb had emailed the membership report for the period ending 6/30/2021 on 7/19/2021.

Ron Magos moved to approve the Executive Secretary's report, second by Matt Roberts. The motion was adopted.

Convention Reports

2021 - Penn Yan, NY - Ron Magos announced that Steve Grimsley agreed to preside over the annual membership meeting and election during the convention. Jan Billeb reported that Duane Shockey had approximately 60 people registered to attend.

2022 - Burlington, VT - Steve Grimsley provided the planned schedule for the 2022 convention in Burlington, Vermont. The arrival date will be Thursday, June 23, with a departure on Wednesday, June 29. A room block of 50 rooms is reserved at the Best Western Windjammer Inn, Burlington, at the rate of \$139 per night plus 10% tax (a hot breakfast is included). Reservations can be made by calling the hotel direct at (802) 863-1125 (be sure to ask for the International Cessna 170 Assoc room block) or online at https://www.bestwestern.com/en_US/book/hotel-rooms.46013.html?groupId=K70EY7S9

Preliminary plans include:

Friday - A visit to Stowe in the morning, followed by lunch in the Beer Garden at the Von Trapp Lodge, a tour of the Burlington waterfront, and a sunset cruise (2 hrs.).

Saturday - Airport Day at Franklin County Airport (KFSO), will start with a pancake brunch including real maple syrup, forums, spot landing, and bomb drop, fol-

lowed by the auction. Members of EAA #613 will assist with airport day. The ladies will visit downtown Saint Albans.

Sunday - Visit Crown Point and Fort Ticonderoga. Board meeting in the evening.

Monday - Fly-out to Basin Harbor, tour Champlain Maritime Museum. Area rep and convention hosts meetings in the afternoon.

Tuesday - In the morning tour downtown Burlington Church Street, afternoon annual business meeting, and evening awards banquet.

Steve is still working on the convention logo for the t-shirts and convention bags.

2023 - Sault Ste Marie, MI - Miles Bowen reviewed plans for the 2023 convention with potential dates of Sunday, July 16 to Saturday, July 22 (the week before Oshkosh) in Sault Ste Marie, Michigan (2-1/2 hrs. from Oshkosh). Sanderson Field (KANJ) will be the general aviation airport that has plenty of grass parking space. Commercial flights can arrive from Chippewa County International Airport, Kincheloe, Michigan, or through Canada. Traverse City's Cherry Capital Airport is about an hour and a half away.

Future Conventions - No possible future conventions were presented.

Ron Magos moved to approve all of the convention reports, second by Dave Stokes. The motion was adopted.

Historian's Report

Steve Grimsley reviewed the written report that he had emailed to the board on October 8.

1. Past Convention Albums 1969, 1977 to 1980, and 1986 to 2019 are now merged pdf files with bookmarks. The largest file size is 52 mg, with most of them much smaller. All 39 of these albums have been uploaded to the website and are available to be viewed and downloaded by the membership. The Historian is grateful for the assistance of board member Karl Towle in getting the albums that were in separate files merged and bookmarked into single files that are easy to view.

2. *The 170 News* technical articles on Scott 3200 tail wheel rebuilding and the article on the old eight bolt crankshafts have been published.

3. *The 170 News* 1st Quarter 2000 to 4th Quarter 2005 are scanned and have been uploaded to the website as downloadable pdf files.

4. Long term project of rebuilding early Convention photo albums is being organized. Extensive photos donated from Richard Walker's estate will be included. No progress to report on this task.

Ron Magos moved to approve the Historian's report, second by Terry Daily. The motion was adopted.

(Continued on page 8)

Hangar-Ads

Ads in the *Flypaper* are for members only and are free, except for items that are not 170-related there is a \$5 charge per ad per placement.

No business ads are accepted. Business ads may be placed in the quarterly publication *The 170 News*.

Ads will be run one time unless notified to place again by the next deadline. The 10th of each month is the deadline for all ads or materials for publication.

Hangar-Ads must include prices. Ads need to be submitted in writing. Ads will be edited as space is limited.

Mail, fax, or email ads to the Executive Secretary at headquarters. Please put "Flypaper Ad" in the subject and include your member number.

FOR SALE: Left and right side window with frame for Cessna 70 ragwing. Purchased decades ago as spares. \$150 for both, plus shipping. Joseph Neff joejudieneff@gmail.com.

FOR SALE: Service Manuals and Parts Manuals for the following: All Cessnas 150, 172, 177, 177RG, 182, 180/185, 206, 207, 310, 337. \$5 each plus shipping. Duane Shockey duaneshockey@outlook.com.

FOR SALE: Cessna 0513003-15 windshield "V" brace. Fits Cessna 170 and early 172. \$357. Dave Gladden (907) 671-1370 or dgladden0@gmail.com.

FOR SALE: At your request, I can make fresh "mouse trap" springs, part # 04115554, for your door latches. Fits all years and models of Cessna 170. Two springs for \$15 plus shipping. Email brucefenster@gmail.com for details.

FOR SALE: At your request, I can make copies of Cessna winterization plates. 170/170A/170B/172 Nose cowl vent assembly, similar to part 0552104 \$45 +SH. 170/170A/170B serial 25372 and prior grill cover assemblies similar to part 0552101, \$100 +SH. 170B 25373 and on/172 grill cover assemblies similar to part 0552106, \$130+SH. Email brucefenster@gmail.com for further details.

Fly-Ins

COVID-19 protocols in effect at event locations should be adhered to by all participants.

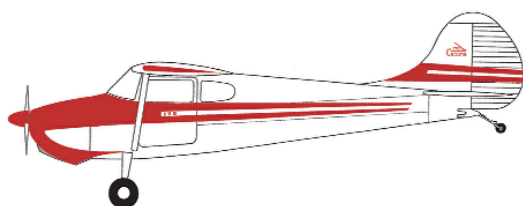
December

TX Dec 3-5 Bryan/College Station - Christmas Party

The host hotel, Best Western Premier on Austin Colony, is giving us a reserved rate of \$99/night for thirteen rooms. Sign up quickly, because there will be a lot of activities going on that weekend in Bryan and College Station

Best Western's phone number is (979) 731-5300, and our reservation code is CESS170.

Questions contact Ken Peck (512) 468-7790 c170ken@gmail.com.



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Draft Minutes Board Meeting (continued)

(Continued from page 6)

Internet Technology Committee

Karl Towle summarizes that the forum proposal (emailed on October 6) was a continuation of the website/forum project previously approved. He explained that because the forum software had not been incrementally upgraded, a significant upgrade was needed, requiring backing up the current forum to minimize the risk of problems. Karl added that the Internet Technology Committee agreed with the recommendation from Visual People. Jan Billeb clarified the proposal was asking for approval to expend \$425-510 to see if an upgrade would work or another option would have to be pursued.

Ron Magos moved to approve the Forum Proposal, second by Ryan Smith. The motion was adopted.

Parts/Maintenance Advisor's Report

Ryan Smith raised the question of the status of the inventory of the parts owned by the Association. Ron Magos will follow up with George Horn.

George Horn emailed the following report the next day on October 10, asking that it be entered into the minutes.

The pandemic has created an increase in calls, emails, and texts requesting help for parts and/or maintenance questions this last year. Most contacts have been "generic" in nature seeking sources for OEM parts, and questions regarding restoration projects.

Door and door parts such as hinges and latches and "hold-open" devices have been popular subjects. Generator-to-alternator conversions, as well as conversions to newer electronic flight displays and ADS-B upgrades are also drawing increased interests.

The Forum is expected to undergo an "upgrade" soon to more recent software, and I expect that to continue to serve as a major information-exchange venue.

The last "early" landing gear leg was sold this last year and payment sent to headquarters. No more Assoc'n owned landing gear parts are in my storage. There are still two boxes of salvage miscellaneous small parts from wrecks, most of them unairworthy.

Steve Jacobsen has shipped two boxes of old parts manuals to us, and I will be offering them online to our Members via the Forums in a distribution experiment which I hope will prove beneficial.

Steve Grimsley has donated a Red-tagged crankshaft as a teaching tool I hope to present in next years (Vermont) convention seminar along with other examples of potential issues.

Please accept this as the 2021 report.

Kind regards

George Horn

Nominating Committee Report

Ron Magos reviewed the written update that Duane Shockey, chair of the Nominating Committee, Jim Yates and Karen Griner had provided earlier. They have confirmed who will accept nominations. Ron Magos will accept nomination for President, Karl Towle for Vice

President, Terry Daily for Secretary/Treasurer, Steve Grimsley for Historian and Larry Roessler, Ryan Smith, David Stokes, David J. Nelson, David L. Nelson for Director (4 needed).

Nominations will also be taken from the floor during the annual membership meeting.

Ron Magos moved to approve the Nominating Committee report, second by Karl Towle. The motion was adopted.

Scholarship Committee

Jan Billeb reported on behalf of the Scholarship Committee of Debra Wood (chair), Katie McGreevy, and Jamie Horn that two scholarships were awarded. Thank you letters have been received and will be in the next issue of the newsletter and a copy was sent to Duane Shockey to display at the convention. The current balance in the Scholarship Fund is \$3,975.50.

Ron Magos moved to approve the Scholarship Committee's report, second by Matt Roberts. The motion was adopted.

President's Report

Ron Magos read a prepared report.

I want to thank everyone for the support and consultation this past year. I want to say a special thanks to Jay Baeten for his 24 years of leadership in organizing the type club table at the EAA convention. Joe Smothers has graciously agreed to assume the responsibility. Thanks again to both.

Our organization is in great shape both financially and membership numbers. I feel we are getting back on track after this last year and a half. Planning for the next two conventions is well underway.

I will be coordinating with the Vintage EAA to honor the 75th anniversary of the 170 in 2023 at Oshkosh. The 170 will be the featured vintage airplane that year at the convention and be featured in an issue of the EAA Vintage magazine. I will give more details as I get them.

I regret having to change my plans on attending this year's convention but look forward to Vermont.

Old Business

No one offered suggestions for revisions or additions to the Board Policy Manual.

New Business

John Hess asked who would be responsible for attending the Type Club Coalition meeting on Tuesday at Oshkosh. David Stokes volunteered to represent the Association.

Matt Roberts asked that when using his Zoom account for Association meetings if there was a way to register people or some way for him to know in advance who to admit into the meeting. Jan Billeb suggested that when the meeting announcement went out, she could add that

(Continued on page 15)

2021 Scholarship Winners

TIC170A was pleased to be able to award two scholarships.

Thank You From Allison Couch

I was delighted to learn The International Cessna 170 Association selected me as their 2021 scholarship recipient. As you know, I recently graduated from an Integrated Airline Transport Pilot Licence program with a commercial pilot licence and multi-engine instrument rating. After two years of intense study and flight training, I had finally achieved my goal to become a commercial pilot. Unfortunately, goals are never achieved so easily without first having to deal with setbacks along the way. COVID-19 has had a disastrous affect on the aviation industry forcing me to adapt to an uncertain job market and to come up with a recovery plan in order to advance my flying career.

Determined to stay in the aviation industry, I have been busily applying to potential job opportunities, both flying and non-flying positions. Luckily, last month I successfully obtained a non-pilot position as a flight coordinator with NovaJet Aviation Group, a corporate aircraft operator in Toronto. I accepted the job on the understanding I would be given the opportunity to advance to a first officer's position, providing I can first accumulate a total of 500 hours flight time. I got 50 hours to go, though it comes with a \$ 10,000 CAD price tag to pay the aircraft rental fees.

Using the funds from your scholarship, I have now enrolled in Emergency Maneuver Training. Not only will

it gain me additional hours of flight time, the unique training will make me a safer pilot. You would be interested to know, the training will be conducted in the aerobatic, German-built Extra Flugzeugbau EA300L-a tail dragger aircraft like the Cessna 170!

I liken my situation to that of an athlete competing at this year's Tokyo Olympics. The encouraging push from The Cessna 170 Association has now qualified me for the final round to become a first officer-my equivalent to an Olympic gold medal. Thank you for your support and for having the confidence to select me for The International Cessna 170 Association 2021 scholarship award.



Thank You From Shannon Sorg

I was lucky enough to be a recipient of the Cessna 170 Association scholarship this year and it has been such a huge help to me financially. I have fully funded my flying alone with no financial help, working up to three jobs throughout my training. When Covid-19 hit, I was laid off and I've been working intermittently since. I was originally planning on using this scholarship to pay for my multi-engine instrument training, however I was recently temporarily laid off once again, leaving me with no way to pay for the remainder of my commercial license. This scholarship has allowed me to continue flying, even when I wasn't working.

Thanks to this scholarship, I have now completed almost all of the instrument and dual skill-building hours required for my commercial pilot license.

I also took the written exam three weeks ago. I am hoping to complete my commercial check ride in August.

Once I finish my commercial check ride, I will begin my multi-engine and instrument training. I live a two and a half hour drive away from the nearest flight school that offers multi-engine and instrument training, so I will be relocating in order to complete that. I look forward to furthering my education with these additional ratings.

After I finish my multi-engine instrument training, I will commence looking for an entry-level pilot job, ideally somewhere rural, such as Alaska or Northern Canada. I would love to experience the adventure that comes with flying in remote areas. As I build hours and experience, I

would like to work towards completing my airline transport pilot license. Once I have enough hours I would like to move to the regional airlines. My end goal is to become a captain for a major airline while remaining active in the general aviation community.

Thank you so much for this opportunity. This scholarship made a huge difference in my life, without it I wouldn't even be close to finishing my commercial license.

Thanks to the Cessna 170 Association scholarship I will finish my commercial license very soon and be one step closer to getting my first job in the aviation industry.



Rehabilitation of a 1948 C170

Fuel System Options

It is my pleasure to own a Cessna 170 and even more pleasure to fly it. Since acquiring a 1948 C170, SN 18269, I've been on a steep learning curve. Finding a mechanic who is willing to work when you aren't watching and sees the task through to completion were early challenges for me. Thankfully, I did find that mechanic after a couple of false starts.

The engine core was purchased from a Cessna 170 Association member's estate and sent off for a major professional overhaul. When paying for the overhaul, I was told that the engine was really in fine shape to start with, but one magneto had been assembled incorrectly. That was the reason that the engine was replaced and wound up as a spare. Apparently, the same mistake was made repeatedly on the magneto rebuild. That made a good case for a second set of eyes on any project.

My 170 had a landing mishap in 1972 with a new owner landing downwind at a mine strip. The result of that was a gearbox needed some attention. Even with a shim under the gear leg, it operated with a low wing because of the tweak in the gearbox. More shimming was required. One of my early decisions in rehabilitating this lovely flying machine was installing the P-Ponk kit to "beef up" the gear system. One omission was made during the installation, the allowance for shimming to level the wings. Those eyes again.

After three years and as many mechanics, I flew away with a big smile in the newly airworthy N3950V. My uncle had owned this 170, and I had flown it with him in my younger days. Uncle Jack had gone West a few years prior at the age of ninety. He was a quiet man, but he became fully alive and talkative when working on and flying this 170. It was his "happy place." I love the fact that we were able to get it flying again. It has become my happy place!

Once safely in my hangar, I've continued to make improvements and repairs. Some, like ADS-B (Tail Beacon), are necessary to make destinations and routings easier. Some are more of a personal challenge, like leveling the wings. I'd like to have that airplane sit as pretty as the next one on the flight line. I'd also like for it to behave itself when taking off with a strong RH crosswind.

While exploring the options available, the obvious question came up every time. "Are those gear legs straight?" Luckily for me, being a member of the International



After First Run

Cessna 170 Association, I have many resources and a wealth of experience available in the Forums, on the phone, email, and in person. I borrowed another set of gear legs to compare to mine and to install if needed. It turns out that my gear legs are as straight as the next bird's legs.

During the gear leg exploration, a visiting 170 Association member asked me a funny question. "Do you know that you don't have a fuel pump?" "Yes," I replied, "Is that a big deal?" To which my friend replied, "It is kind of a big deal because it is a requirement. That is unless you've modified the fuel system." The conversation got interesting, and suddenly, my wing levels weren't as important as they were before. Now I'm grounded, and for a good reason.

Those eyes, the second set on a problem, are invaluable. They've probably saved me from more than one form of embarrassment. These could range from losing power when you need it most at a high angle of attack due to low fuel pressure to the unwanted attention from an agency for noncompliance with the design of the very machine that makes you smile.

It is in the manuals that the engine and the airframe exclude one another. You may find a reference to a component or system or see it in a drawing but without references. This challenge is particular to the first year model of the 170, the 1948 or "ragwing," which has the fuel lines running forward (uphill) and then down the forward doorposts, thence inwards to the fuel selector valve. From 1949 onwards, the 170 fuel lines run aft, down the rear doorposts, and forwards eventually to the fuel selector valve. There is a slight routing difference from A models

to B models. But, they all keep gravity on their side, thus eliminating the requirement of a fuel pump.

In the 1st Quarter *The 170 News*, George Horn wrote on the details of the 1948 fuel system, which includes a valve, a bypass, and a fuel pump. That is a great read if you're looking for a solution. Also mentioned in a recent *FlyPaper* or quarterly publication was the fact that I'm not alone on this journey. There are two paths to compliance: pump and hardware or rerouting of the fu

el lines. I've chosen the reroute method and have the guidance of an engineer (Designated Engineering Representative or DER) that specializes in vintage aircraft and fuel systems.

That guidance is to choose an approved method and follow the diagrams in either the A model or the B model Illustrated Parts Catalog (IPC). I selected the A model pattern for two reasons: 1) The IPC and the Aircraft Flight Manual (AFM) of the A model are better representations of the actual layout, and 2) I was able to inspect an A model of a friend, and it turns out that Cessna agreed (in 1949) with the plan that I'd come up with in 2020.

There will be a follow-up article on the details of the work, but a quick overview looks like this: Refer to the IPC and the AFM to build the lines, get the documentation



Major Overhaul

of a previously approved modification, get your friendly A&P / IA to supervise your work, document the work done (including part numbers) on Form 337, employ a DER with vintage and fuel systems as their specialty, donate some blood, sweat, and tears to your 170. It makes you happy.

The biggest thing: get more than one set of eyes on your project. You will be amazed at what you'll see.

Note: *Cessna170.org* Technical Documents section has links to all AFM's, Owner's Manuals, and other useful documents. In the 1948 Owner's Manual, you can read about the fuel system for an overview, including the engine-driv-



Home in Texas

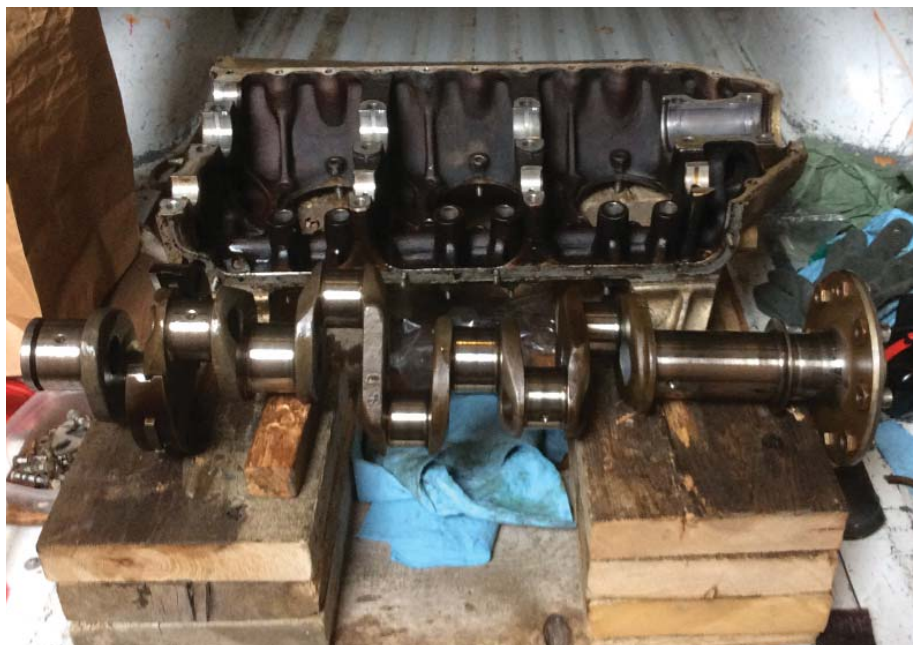
Servicability of Early C-145

0-300 8-Bolt Crankshafts

In the 2nd Quarter 2013 *The 170 News*, I wrote an article about the main journal and crankpin wear limits and the point at which grinding the crankshaft to -.010 undersize would be necessary for a return to service. It was my understanding, at the time, that wear on these bearing surfaces to service limits or beyond was the main determining factor for grinding or scraping a crankshaft. My purchase of two runout C-145 salvage engines gave me much more experience with these early crankshafts. I was aware of the scarcity of these old 8-bolt crankshafts that have been out of production since the 1970s. I also knew, from knowledgeable people, that finding one of these crankshafts certified return to service without being ground to undersize would be "practically impossible." I thought the best chance, however remote, for finding one would be by way of a salvage parts engine.

Last year two surplus parts engines came available in locations where I could pick them up myself and not have to pay for crating and shipping. Both of them were from 170 Association members, one in Texas and one in Massachusetts. The Texas engine was complete with all accessories, but only a sketchy oral history as the logbooks had been lost. Without a documented history, there was substantial uncertainty about the major components of this engine, but I thought it a worthwhile project to undertake. The Massachusetts engine was missing some accessories, but it came with complete logbooks, had low total time, and the crankshaft was unground on standard bearings. I acquired this engine thinking that the crankshaft could possibly certify without grinding but was nearly certain to certify regardless.

I traveled to Massachusetts, first bringing that engine back to my hangar and quickly disassembled it. The interior was reasonably clean, the crankshaft was on standard bearings with the main and crankpin surfaces smooth and unmarred, and the teeth on the gears with good edges. The first photo shows the open case with the crankshaft having been lifted out. I boxed up the crankshaft along with the cam and crank gears and sent them off to Aircraft Specialties for inspection. It was a bitter surprise to me that this crankshaft was declared unserviceable. What caused the crankshaft to fail was a small crack, detected by magnetic particle inspection, in one of



Crankshaft removed from the disassembled engine.

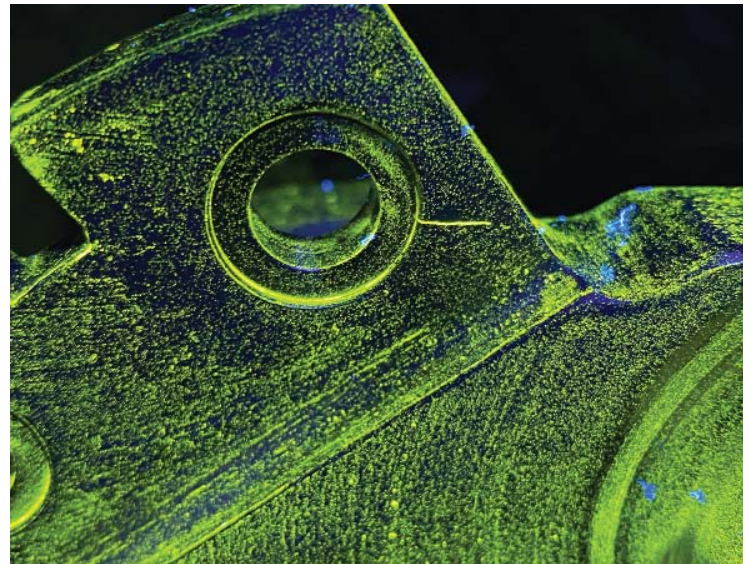
the counterweight blades. Photo Two shows the crack in the counterweight blade radiating out from behind one of the blade bushings. To lose a low-time unground crankshaft because of a tiny crack was a great disappointment. You can only speculate as to the reason for the crack. It could possibly have been from when the bushing was pressed into the blade or maybe a flaw in the original forging. The counterweight blades are critical because if a counterweight separated from the crank during operation, it would cause a catastrophic engine failure. This crankshaft was scrapped, but fortunately, the gears and counterweights passed inspection and were returned as serviceable.

I picked up the engine from Texas during one of my road trips across the country. The disassembly of this engine showed the interior to be quite dirty with burnt oil residue. The propeller flange on the crankshaft was pitted with some corrosion, but I thought it could be cleaned up and dressed out. The crankshaft was on standard bearings indicating that it had not been ground to -.010 undersize. The crankshaft and gears were shipped off to Aircraft Specialties for inspection. I hoped to get at least a serviceable crank after grinding, but this crankshaft also failed. The flange was pitted below the minimum thickness. Several of the findings on this crankshaft showed that it had been operated under harsh conditions.

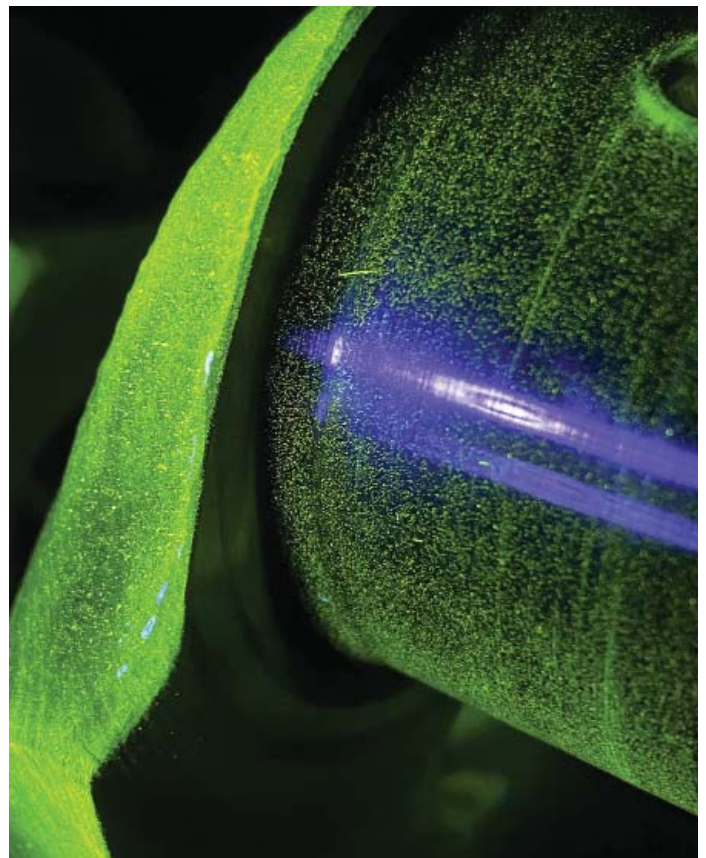
The edge runout of the flange was barely within acceptable limits. Also, the magnetic particle inspection showed cracks on the bearing surfaces of the crankpins. The magnetic particle image in Photo 3 shows a surface crack on one of the crankpins, likely caused by heat stress and inadequate cooling. This crank would have needed grinding to remove these defects on the wear surfaces, but it was already condemned because of the flange pitting. Once again, I only had usable gears and counterweights from this effort. Engine projects start with a serviceable crankshaft and, after two attempts with salvage engines, I didn't have a complete engine project that could be assembled.

Since I had come this far, the only thing for me to do to get a complete engine project was to purchase one of the very few 8-bolt serviceable crankshafts that occasionally come up for sale. I found a newly ground C-145-2H crankshaft with very low runout numbers for the main journals and the propeller flange. I supplied a set of counterweights that went on this crank, and it is now complete and ready for installation. The C-145-2H crankshaft has a small oil inlet hole through the front main journal to actuate a controllable pitch propeller on the O-300-B engine case. Other than this, and a different front plug, the C-145-2H is the same as the standard crank and can be run in a C-145 / O-300-A case. It is critical that you use the 36170A1 front bearing, not the 530516A1 bearing used for the O-300-B case with a manually controlled propeller. The front bearing is matched to the engine case so that the oil holes in the bearing align with the oil ports in the case. With this certified crankshaft, I now have an engine project that can be built up complete, but this wasn't an easy process nor an inexpensive one.

Here is a summary of my learnings. The old-style 8-bolt crankshafts are getting very scarce in serviceable condition. Finding one serviceable without the mains and crankpins ground is "practically impossible." I was zero for two in getting a good crankshaft by way of salvage engines. These crankshafts fail for numerous reasons other than normal wear on the surfaces in contact with the bearings. Not mentioned earlier in this article, but another club member recently had a crankshaft fail because the wear on the thrust surfaces was beyond max limits. The best way to maintain crankshaft health is by frequent oil changes, good engine cooling, and avoiding shock thermal stress in operations. Keeping these 8-bolt crankshafts running is the only way to continue using the McCauley DM 1A170 series propellers and the original Cessna 8 bolt prop spinners. Both of these propellers and spinners are still available newly manufactured.



Magnetic particle image of the counterweight blade crack.



Magnetic particle image of the crankpin surface crack.

170s in the Air

Stephenville, Texas, Fly-in

Ken Peck #3333 Texas Area Rep



Texas members and guests flew and drove to Stephenville, TX (KSEP) on Saturday the 7th of August for our monthly fly-in. There was a good turn-out considering it was IFR in parts of the state in the morning and somewhat windy at Stephenville.

Everyone enjoyed good visiting and BBQ. A discussion was held concerning future fly-in locations. Also, everyone is looking forward to the Christmas party in Bryan the first weekend of December.

We were able to see six nice 170s lined up on the ramp and a pretty Stinson as well.

Fifteen members and guests were present including: Gary Potter, Bobby Nelson, John Bowen, Karl Towle, Randy Starbuck, Mark and Shelly McMillen, Doyle Lawrence, Carroll Lewis, Monte Michael, Paul and Andy Wood, Naomi Goodlett and Ken Peck.

Photo by Naomi Goodlett

Hilltop Lakes, Texas, Fly-in

Sheila Wyborny TX



Left bottom to top: Jeane and Buddy McGown, Judi Coffey

Right bottom to top: Sheila and Wendell Wyborny, Pete Coffey

Participants Jeane and Buddy McGown, Pete and Judi Coffey, and Wendell and Sheila Wyborny drove to the July 3rd fly-in at Hilltop Lakes, and a few spots along the route were a bit too "exciting" due to heavy rains. Sheila and Wendell picked up Buddy and Jeane on the way, and they had the bonus of an enjoyable visit.

Hilltop Lakes residents were geared up for an outdoor celebration, but it was pretty much a rain-out. 170 friends scampered into the restaurant between showers.

While enjoying our meal, we discussed our Pre Christmas Weekend in Bryan the first weekend in December. Our host hotel, Best Western Premier on Austin Colony, is giving us a reserved rate of \$99/night for thirteen rooms, so sign up quickly, because there will be a lot of activities going on that weekend in Bryan and College Station, and rooms could be at a premium.

Best Western's phone number is (979) 731-5300, and our reservation code is CESS170.

We hope to see you there.

Cedar Mills, Texas, Fly-in

Karl Towle #8213 TX

The rain paused just long enough for one C-170 and three vehicles to make it in to Cedar Mills on June 5th for a leisurely lunch and friendly visit. Six of us.

Pelican's landing treated us very well, and everyone had a great time.



Pictured from left to right: Karl, Nancy and Krystal Towle, Debra and Paul Wood, Bob Jolley, plus canines Miya and Kota.

Draft Minutes Board Meeting (continued)

(Continued from page 8)

people need to notify if they plan to attend.

Ron Magos explained that there would be 50 slots for upfront parking at Oshkosh for the 75th birthday celebration in 2023. John Hess suggested that the aircraft be parked in rows of 170, 170A, and 170B.

Bob Jolley explained that after Jan Billeb sent welcome emails and a welcome membership card, she forwarded him the names of new members once a month. He has been sending a personal email (copying the appropriate area rep) to the new members as a welcome from a board member, encouraging convention attendance. Karl Towle volunteered to take on doing these welcome emails.

There being no further business, Terry Daily moved to adjourn, seconded by Joe Smothers.

President Ron Magos declared the meeting adjourned at 3:20 pm Eastern.

Respectfully submitted,
Jan Billeb, Executive Secretary



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